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Mrs.Beck
Honors Bio

Introduction:

Ecological succession the process of regrowth after a disturbance. There are two types of succession, primary succession and secondary succession. At Gunston we have set up shoreline restoration, to regrow the plants. The type of succession thats taking place on the living shoreline at Gunston is primary succession. The succession process has been influenced by human aid, so it is not completely natural. The shoreline is next to a river. Erosion is heavily affecting the river. Population density is the unit of individuals per area, and population distribution is how the organisms in a certain area are distributed. We did this lab to find out how successful this succession was.

Procedure:

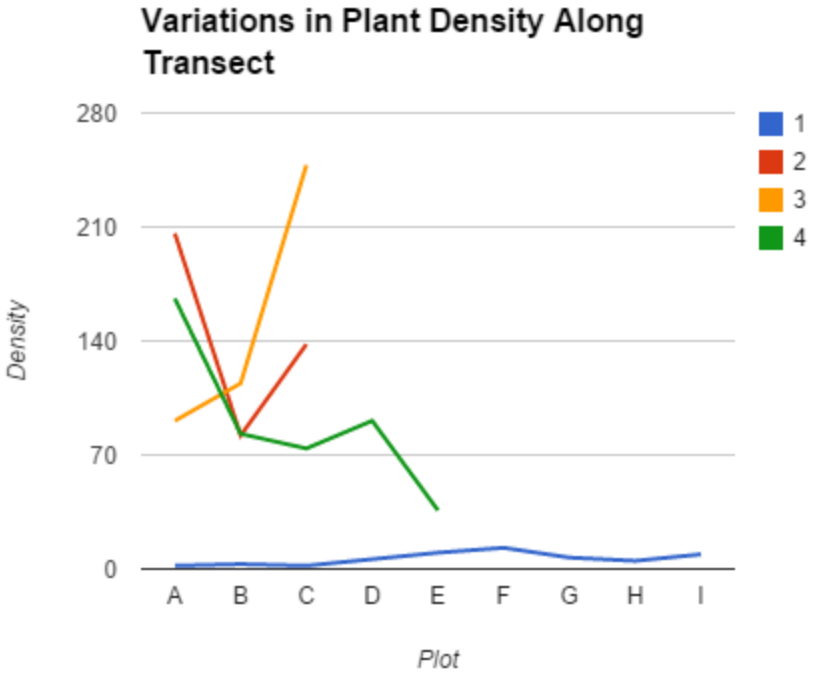
Set up four transects to sample, the transects ranged in length from 3 meters to 9 meters. Each transect should sample multiple one meter squares. Then, Record the species in a quadrant of your transect, identify the type of species and amount of that plant, sketch the quadrant. Next, repeat step two twice, for the other two quadrants in the transect.

Results:

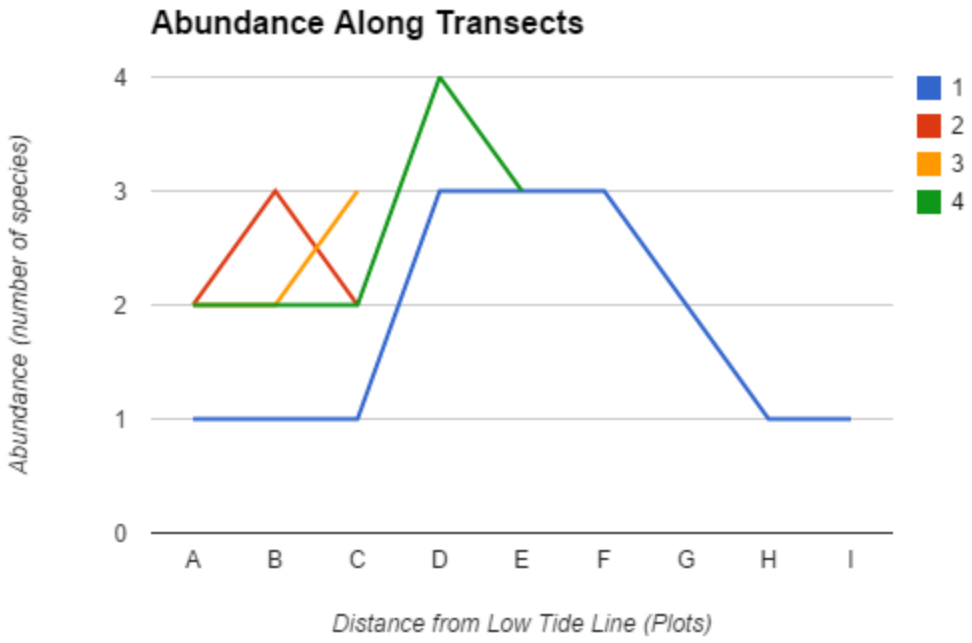
Density was the greatest overall in Transect two, and it was smallest in Transect one. There was an error in our data, the data for transect one was collected incorrectly, by counting the number of individual species wrong. The plant with the highest frequency is the Common Threesquare, and the plant with the lowest frequency is Unknown B.

Density	transect
6	1
292	2
149	3
90	4

In the following graph, it shows that the there is a steep decline in density at plot B, and then the different densities vary from there.



This graph represents that the closer the plant is to the middle of the Living Shoreline, the more abundance there is.



Analysis:

The Common Threesquare was the most dominant species on the living shoreline. The Salt Marsh Hay was the second most common. Every quadrant had at least two species in it. Based on density the Common Three Square was the most dominant. Based on frequency the Common Threesquare has the highest. The Common Threesquare was the most dominant for both frequency and density. For each species the plants are random, and for the whole community the plants are also randomly distributed. As we get more inland the density of the plants increase, and they're are less plant as we get close to the low tide line. The relation between density and frequency is, density is how compact the species are in and area, and frequency is how often a specific species occur. Plants can have a high density, but low frequency.